



natural

natural

Version 4.1.2 for
Mainframes

SMARTS Installation and
Operation of the IMS/DC Client
Environment

 **SOFTWARE AG**

This document applies to Natural Version 4.1.2 for Mainframes and to all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.



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Installation and Operation

This documentation provides information on how to install and operate the IMS/DC Client Environment in a Message Processing Region (MPR) for the use in conjunction with Software AG's Multiple Architecture Runtime System (SMARTS).

The information on installing and operating SMARTS is structured as follows:

	Installing the IMS/DC Client Environment in a Message Processing Region (MPR)	Informations how to install the IMS/DC Client Environment in a Message Processing Region (MPR)
	User documentation for SMARTS IMS/DC interface	The user documentation for SMARTS IMS/DC interface

Installing the IMS/DC Client Environment in a Message Processing Region (MPR)

Install the IMS/DC Client Environment in a Message Processing Region (MPR)

1.

1. **Create a member which will hold all programs which need to be pre-loaded into the MPR.**

The member must be named DFSMPLxx where xx is the suffix characters designated by the PRLD parameter in the MPR JCL.

2. **Include list of programs which invoke SMARTS facilities.**

The pre-load program list is used to ensure that all programs that use SMARTS do not get deleted from the MPR storage during the life of their unit-of-work (transaction). Add all User-written application program names which use SoftwareAG software – e.g. Adabas SQL Server, XTS or any other required SoftwareAG optional programs.

2.

1. **Create a member which will hold all programs which will need to run at MPR initialisation.**

The member must be named DFSINTxx where xx is the suffix characters designated by the PREINIT parameter in the MPR JCL.

2. **Include POSIX Initialisation Table to the list.**

The pre-initialisation program list is used to automatically initialise SMARTS POSIX Kernel at MPR start-up: Add PAINKERN to the list of programs to execute at MPR initialisation.

3. **Create the MPR Procedure**

Caution:

All IMS applications which invoke SMARTS facilities must run in a dedicated IMS MPR.

1. **Create the JCL to invoke a MPR**
2. **Set a single dedicated Class parameter to run in this MPR – e.g. CL1=032.**
3. **Set a Pre-initialisation parameter to point to the dataset member which holds all modules to be run at MPR initialisation time – e.g. PREINIT=AQ.**
4. **Set a Preload parameter to point to the dataset member which holds all programs to be preloaded – e.g. PRLD=AP.**
5. **Include the IBM OS/390 Callable Service linkage-assist routine library Add SYS1.CSSLIB to the STEPLIB concatenation in the procedure.**

6. Include the SMARTS load library

Add APS_{vvv}.MVSLD00 dataset to the STEPLIB concatenation in the procedure- where vvv is the SMARTS version.

7. Include other SoftwareAG libraries

Add other required SoftwareAG datasets as directed by the Installation Procedure of each product.

8. Add the SYSPARM dataset

Add a “//SYSPARM DD” statement for the SMARTS POSIX configuration. This dataset is required to define the runtime characteristics of your POSIX environment. For more information, see SMARTS Configuration Sources.

9. Add a dataset for environment variables

Add a “//CONFIG DD” statement for the dataset containing the environment variables required for your POSIX applications within IMS/DC. This DD name is specified by the ENVIRONMENT_VARIABLES parameter in SYSPARM, which defaults to “CONFIG”. For more information, see the section SMARTS POSIX Miscellaneous Parameters, ENVIRONMENT_VARIABLES.

10. Optional SoftwareAG supplied programs

PAINKERX – This program may be used to communicate with the SMARTS Kernel to initialize and terminate the Kernel, and to invoke Kernel commands. PAINUSNF – This performs a User sign-off of the SMARTS IMS/DC environment. This does not affect the normal running of the MPR if the associated transaction with this program is not used when a user ends an IMS session.

11. IMS Sysgen requirements

Any optional SoftwareAG programs which are to be used will have to be included in the IMS Sysgen together with the transaction names associated with these programs. The transaction names may be named to installation standards.

12. IMS/DC SMARTS interface module list

The following programs support the SMARTS IMS/DC interface:

PAIAINT
PAINENVF
PAINITPT
PAINKERN
PAINKERX*
PAINKTX
PAINMNIT
PAINNMIT
PAINPGMT
PAINUSNF*

Where Next ?

You have now installed and configured the SMARTS IMS/DC software. All User-written IMS/DC application programs which interface with SoftwareAG software must link-edit the SMARTS Environment Dependent Initialisation module PAIAINT, and, if required, SMARTS main Environment Dependent wrapper module PAINMNIT, or SMARTS non-main Environment Dependent wrapper module PAINNMIT, into the application program load module. For more information, see the SMARTS documentation.

User documentation for SMARTS IMS/DC interface

This section describes:

- Log Messages
 - Online Messages
-

Log Messages

APSPSX0089-nnnnnnnn SMARTS/IMS: fffffff of token failed - yyyy zzzzzzzz, return code n

Explanation This informs that the request fffffff of MVS Token Services has returned an error code n for the token value zzzzzzzz

where :

nnnnnnnn

system id

ffffff

function - Create, Retrieve or Delete

yyyy

IMS system id

zzzzzzzz

token value

n

return code from MVS Token Services

Action Contact SoftwareAG Customer Support Desk giving the exact error message for further diagnosis and support

cc

is the return code

rr

is the reason code

Note:

refer to SMARTS documentation for information on return and reason codes

Issued by PAINUSNF

None. See SMARTS log for all messages.

Issued by PAINMNIT and prefixed by -

APSPSX0099

Program *pppppppp* terminated with return code *rr*

where

pppppppp

is the application program name

rr

is the return code (if any) returned by the application program